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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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021091  
JOHN H CROZIER  
1934 HUNTINGTON TURNPIKE  
TRUMBULL CT 06611

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ART UNIT	PAPER NUMBER
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1743

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Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

# Office Action Summary

Application No.  
09/198,018

Applicant(s)  
Thomas W. Astel

Examiner  
Patricia Kathryn Bex

Group Art Unit  
1743



☒ Responsive to communication(s) filed on Apr 27, 2000

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle* 35 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

## Disposition of Claim

☒ Claim(s) 1-29 is/are pending in the application

Of the above, claim(s) 19, 20, and 24-29 is/are withdrawn from consideration

☐ Claim(s) \_\_\_\_\_ is/are allowed.

☒ Claim(s) 1-18 and 21-23 is/are rejected.

☐ Claim(s) \_\_\_\_\_ is/are objected to.

☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.

## Application Papers

☒ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some\* ☒ None of the CERTIFIED copies of the priority documents have been  
☐ received.

☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

☒ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_

☐ Interview Summary, PTO-413

☒ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

— SEE OFFICE ACTION ON THE FOLLOWING PAGES —

Art Unit: 1743

## **DETAILED ACTION**

### ***Election/Restriction***

1. Applicant's election with traverse of Group I, claims 1-18 and 21-23 in Paper No. 3 is acknowledged. The traversal is on the ground(s) that all claims in the application are closely related and should be examined together for reasons of efficiency and economy. This is not found persuasive because the record set forth in the previous restriction requirement clearly indicates that the delineated inventions are in fact patentably distinct each from the other or independent each from the other.

The requirement is still deemed proper and is therefore made FINAL.

### ***Drawings***

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: # 104 in Figs 6 & 7 on page 14, # 70 in Fig. 8 on page 16, #194 or #196 in Fig. 10 on page 18, #384 in Fig. 12 on page 19. Correction is required.

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "436" has been used to designate both "multiple pump tubes" and "one piezo-crystal assembly" on page 22. Correction is required.

Art Unit: 1743

***Claim Rejections - 35 U.S.C. § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 15-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "small" in claim 15 is a relative term which renders the claim indefinite. The term "small" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. The term "small" renders the size of the holes perforating the carrier tape indefinite.

In claim 16, it is unclear as to how die cutting the sealing material around a "pattern" of the wells allows for the manual removal of the sealing material from the carrier tape.

***Claim Rejections - 35 U.S.C. § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Art Unit: 1743

7. Claims 1-3, 10, 15 and 21-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Guigan (USP 3,620,678).

Guigan anticipates the instant claims by teaching a method of chemical compound storage comprising providing a longitudinally extending carrier tape 1,12 having thermally formed therein a plurality of chemical receiving wells 3, 13 and adding to each of the chemical receiving wells a chemical compound (Fig 1-3, and 9).

The liquid tight sealing material 10 placed over the chemical receiving wells is taught at (Fig. 3 and Fig. 18).

The sealing material being heat sealed to the carrier tape is taught at col. 4, lines 30-38.

Holes 5 perforating the carrier tape between the chemical receiving wells is taught at col. 4, lines 56-57 and Fig. 1.

8. Claims 1, 18 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Tsunekawa et al. (USP 4,878,971).

Tsunekawa et al. anticipate the instant claims by teaching a method of chemical compound storage comprising providing a longitudinally extending carrier tape 11 having thermally formed therein a plurality of chemical receiving wells 1a and adding to each of the chemical receiving wells a chemical compound (col. 3-4, Figs. 1-2).

Tsunekawa teaches severing individual patterns of the chemical receiving wells from the carrier tape so that individual patterns can be used independently at col. 5, lines 39-40.

Art Unit: 1743

*Claim Rejections - 35 U.S.C. § 103*

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

11. Claims 4-8 and 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Guigan (USP 3,620,678) in view of Anderson (USP 5,092,466).

Guigan as discussed previously, does not disclose repetitive matrixes with a unique identifier. However, such an identifier is considered conventional in the art, see Anderson. Anderson does teach repetitive matrix with a unique identifier 22, 24 (Fig. 1). Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided the chemical storage apparatus of Guigan with the identification means of

Art Unit: 1743

Anderson, in order to reduce the costs of storage, inventory management, and distribution of a very large number of biological samples (col. 2, lines 17-23).

The sealing material heat sealed to the carrier tape is taught by Guigan at col. 4, lines 30-62.

Regarding the specific material of the carrier tape, it would have been obvious to one of ordinary skill in the art to have made the carrier tape of Guigan with the polycarbonate, polystyrene or polypropylene, in order to ensure that the carrier tape is chemically inert with respect to the substances being stored. Since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

With respect to the number of chemical receiving wells in repetitive matrixes selected from the group consisting of 8 by 12 with a spacing of 9 mm between centers, etc. It would have been an obvious matter of design choice to have made the chemical receiving wells in repetitive matrixes selected from the group consisting of 8 by 12 with a spacing of 9 mm between centers of Anderson in order to increase amount of samples which are assayed. Further, since such a modification would have involved a mere change in the size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955).

12. Claims 9, 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Guigan (USP 3,620,678) in view of Hansen et al. (USP 4,565,783).

Art Unit: 1743

Guigan does not teach the sealing material with a pressure sensitive adhesive to adhere the sealing material to the carrier tape such as to permit removal of the sealing material after adhesion to the carrier tape. Hansen et al. do teach the sealing material with a pressure sensitive adhesive to adhere the sealing material to the carrier tape such as to permit removal of the sealing material after adhesion to the carrier tape (col. 3, lines 58-68, col. 8, lines 24-56). Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided in the chemical storage apparatus of Guigan, the pressure sensitive adhesive as taught by Hansen et al. in order to, prevent contamination of the device during storage and incubation (col. 2, lines 19-22).

The lower seal layer having a low melting point (polyethylene) and upper high melting point layer (polyester) joined to the seal layer is taught by Hansen et al. col. 8, lines 24-34.

### ***Conclusion***

13. Claims 1-18 and 21-23 are rejected.
14. The prior art made of record and not relied upon is considered pertinent to applicant's disclose are Astle, Kertz, Tsuruta et al., Meguro et al., Anthony et al., and Findl et al. They are cited of interest in that they show various methods of storage of chemical compounds.
15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to P. Kathryn Bex whose telephone number is (703) 306-5697.



Art Unit: 1743

The fax number for the organization where this application or proceeding is assigned is (703) 305-7718 for official papers prior to mailing of a Final Office Action. For official papers after mailing of a Final Office Action, use fax number (703) 305-3599. For unofficial or draft papers use fax number (703) 305-7719. Please label all faxes as official or unofficial. The above fax numbers will allow the paper to be forwarded to the examiner in a timely manner.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0661.



P. Kathryn Bex  
Patent Examiner  
AU 1743  
July 10, 2000

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